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ABSTRACT

This publication examines the new Oregon competency-based high school graduation requirements that became effective in the fall of 1976, delineates some of the pros and cons of the requirements, assesses the early experience with the requirements, and speculates about the requirements' eventual impact. In addition, a major section of the booklet outlines components of a model plan intended to aid school districts in complying with the new graduation requirements. (Author/JG)

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OSSC BULLETIN

THE NEW STATE GRADUATION REQUIREMENTS: AN OVERVIEW AND DISCUSSION

by
Lorin L. Miller

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PREFACE

In an effort to make the high school diploma more meaningful, and to insure that high school graduates are proficient in the basic skills of reading, writing, and computation, the state of Oregon has mandated some new graduation requirements. The development and implementation of specific programs to meet these requirements are left to individual districts, however.

In this month's Bulletin, Dr. Lorin Miller, director of Federal Programs and Communication for the Grants Pass School District, takes a look at the new graduation requirements, delineates some of the pros and cons, assesses where we are with the new state requirements, and also speculates as to where they might lead us. He also has included a section on components of a plan to meet the new graduation requirements--a section which other districts might find useful as they compare their own efforts to comply with the new graduation requirements.

We feel that this topic should be of concern to school administrators, teachers, and board members as they attempt to cope with these new demands which stem from a desire to insure that every high school graduate is "functionally literate."

Kenneth A. Erickson
Executive Secretary
Oregon School Study Council

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INTRODUCTION AND PURPOSE

A student no longer will be able to obtain a standard high school diploma from the state of Oregon without passing district-prescribed competencies and new state course requirements. This change in graduation requirements has been brought about by a public which perceived in students an inability to perform adequately in basic education and citizenship. The requirement change is an effort to regain the public's faith in American education and also to make the high school diploma meaningful.

In the past, some students graduated from high school without being proficient in the basic skills of reading, writing, and computation. As an example, statistics compiled by one Oregon school district, and reported in an Associated Press news release, show that 75 percent of that district's 1976 sophomore class, to some extent, was failing to learn in those areas.[1] In the two years it takes sophomores to become seniors, this high school is going to be "hard put" to teach 75 percent of its students the basic skills--skills which the junior high and elementary schools failed to teach in nine years.

Ten years ago the U. S. Office of Education conducted a survey under the Adult Education Act of 1966 and the reported results of American education were discouraging:

> Eighty-six million Americans cannot compute their car's gasoline mileage; 48 million can't figure out how much change they should get back from a store purchase; 34 million, given a restaurant menu, are not able to order a meal for two persons not exceeding a set amount; 25 million cannot read a

classified job ad and determine whether they are qualified for the job.[2]

The functional illiteracy revealed through this study is a sad indictment of our educational system. How are people who can't order from a menu or read a "help wanted" ad going to be able to engage in some of the leisure pursuits that our society advocates, such as adult courses for personal improvement, developing hobbies, becoming interested in the fine arts, or using our libraries? How, indeed, can people take advantage of available advice about budgets, nutrition, medical care and safety, or how to be a good citizen?

C. H. Edson reported in the February 1976 edition of the Oregon School Study Council *Bulletin* that the average scores of high school students on the Scholastic Aptitude Test (SAT) have been dropping for the past twelve years.[3] From 1966 to 1975, average scores dropped thirty-two points on the verbal section and twenty points on the mathematics section. The scores have dropped at the same time as there has been a significant rise in the number of "A's" and "B's" given.

The National Association of Secondary School Principals in a 1976 report has recognized the public's skepticism and is advocating change in secondary education:

> Many citizens view schools today with a certain skepticism. They feel that despite heavy expenditures the educational gains are negligible at best. What is the purpose, the public asks, of sending students to school for 12 years if upon graduation these young persons cannot read well or compute accurately?
>
> As a result of this public review and analysis, schools are being asked to account for the quality of their products. Thus, the significance of graduation requirements comes into focus. Graduation, as the capstone of secondary education, logically should reflect some central priorities of schooling.

> Citizens are asking for students to demonstrate these priorities. They want measurable results for the education dollars spent.[4]

The National Association of Secondary School Principals believes that declining test scores and other indicators of poor student performance play a role in the public's need to have the high school diploma defined. The following evidence has cast suspicion on American education: scores on the Scholastic Aptitude Test; the National Assessment of Educational Progress; Comparative writing skills surveys; reports of the U. S. Office of Education on American illiteracy; declining scores in the American College Testing program; the gearing down of study guides to the ninth grade level for college freshman; and the dismay of college officials, business firms, and public agencies at the inability of students to express themselves clearly in writing.

Another need has been seen to update education and to add a practical, as well as theoretical, side to education. Youth are, it is contended, "information-rich but experience-poor." New subjects such as citizenship, personal finance, and career education have been added to the required curriculum. These should enable high school graduates to manage a family budget; deal with the world of consumer credit; know the basics of at least one family or "cluster" of occupations; understand the mechanics of voting; know which public agency to contact if a problem needs to be resolved; know how to get a building permit, and maybe how to "fight" city hall when appropriate.

Our society today is not like the society of the 1930s. Installment buying, the influences of television, the increased use of the

automobile, changing values, and many new inventions require different skills and competencies than were needed forty-seven years ago. The old graduation requirements provided a rigid college preparatory program for all students. Limited attention was given to measurable outcomes related to real-life needs of students. The state of Oregon has mandated new graduation requirements to help solve the problems, but has left it up to the local districts to develop and implement specific systems to meet the requirements.

In the hope of giving some help to school districts which are "tackling" the new high school graduation requirements, the remainder of this Bulletin will discuss some of the pros and cons of the requirements, give an analysis of where we are, where the program might lead us, and illustrate the components of an effective program to meet the requirements.

THE PROS AND CONS OF THE NEW STATE GRADUATION REQUIREMENTS

The Pros

a. Since the new graduation requirements were distributed to local school districts in 1973 by the Oregon Department of Education, many curricular changes have been made in Oregon school systems. The new requirements cause schools to engage in curriculum development and planning in order to certify students in the basics and to implement the new course requirements of personal finance, citizenship, career education, and health. School systems are updating the content of

courses through the state-required Planned Course Statements and are developing scope and sequences in order to teach the district-prescribed competencies in their high schools, junior highs, and elementary schools.

b. The requirement built into the new state law that students are to be certified as competent before they are graduated encourages the schools to individualize instruction for their students. In order to assure that students will graduate, their individual weaknesses must be corrected. Schools are developing remedial reading classes at the high school level; the student is helped in smaller class situations by a teacher plus aides. Also, individualized math programs such as the ones being used at Pleasant Hill, Oregon, utilize up to twenty-four units of instruction with a diagnostic test for each unit, prescription work sheets, and a competency test at the conclusion of each unit. The student must pass the competency test at the 80 percent mark before he/she goes on to the next unit. After the student has passed all twenty-four units, he/she also must pass a final competency test, reviewing all the units previously passed. The student is then certified by the instructor in computation. Some students are able to complete all the units in one semester. It may take other students two or more years to complete their competencies and be certified.

c. In certifying students schools open communication on curriculum matters, i.e., scope and sequence, between all grade levels in the district. High schools have a greater tendency to evaluate and assess the

skill and knowledge levels of students entering their lowest grade level. This information is communicated to the junior highs, which may modify their curricula to better teach the basics. The same process may take place between the junior highs and elementary schools.

d. In some schools the "lock-step" system of education is being broken. For example, when year-end competency tests have been constructed for a course, students may challenge those competencies, plus the enrichment units in the course, and thus be passed to a higher level of instruction. As an illustration, at the conclusion of the eighth grade a student might challenge the ninth grade communication course--where the writing, punctuation, and spelling competencies are taught--and be allowed to move to the tenth grade where speech, interpretation, and analysis skills are part of the instructional curriculum. In this way teachers are freed to give enrichment and to expand the horizons of those students who have been certified at basic levels. Those students who challenge, and are certified, in the lower-level courses can move on to advanced courses where they will not be restricted by those students who have not achieved the fundamentals. Thus the "lock-step" in education is broken.

e. The new graduation requirements are causing educators to stress better lesson planning and curriculum development in those areas that are deemed most important by a district. They also encourage districts to establish financial priorities and, through better record-keeping systems, to become more accountable to the student and the public.

f. The requirement to certify a student in career education is causing the school to "break through" the school walls into the community where the world of work becomes a classroom or learning laboratory. The realization is taking hold that the classroom is not the only place where a student learns. Cultural isolation of teenagers from adults and the community can be prevented.

g. In some schools, resources such as filmstrips, tapes, and other audio-visual materials in Instructional Media Centers are being purchased for specific instructional goals related to the competencies and performance indicators in the new graduation curriculum. Thus there is more efficient purchasing and expenditure of public funds, and teachers are using these resources more effectively to instruct students in the basics.

h. The new graduation requirements are beginning to do away with the social passing concept, at least at the high school level. Students are being kept in certain courses and areas until they have been certified in the fundamental skills or knowledge.

i. In the same way that teachers are being made more accountable to teach, the public can be made more accountable to furnish the needed resources. Educators should be able to identify the precise competencies they are teaching and the resources they need to adequately certify the students as competent. If more equipment, individualized instruction, printed material, or aides are needed to do the job, the educator can "speak up" to obtain the resources to do the job of certifying students

in district-approved basic competencies so the students can be given a graduation diploma.

j. Administrators can obtain greater information as to what learning is taking place in the building. Especially, when competencies have been placed in a computer, the administrator has the capability of asking the computer, for example, how many sophomores have been certified to read at the seventh grade level. Because students are certified each semester by the classroom instructor, the administrator can determine, after he receives the computer print-out, which instructors are having the most trouble certifying their students. He or she can then offer those instructors greater assistance.

The Cons

a. The teacher's academic freedom is restricted because the competency-based curriculum is carefully prescribed and is mandated by the state and district. (Some teachers and administrators, however, feel that academic freedom is expanded at the upper grade levels because, once a student is certified as being competent in the basics and in the new graduation curriculum, there is no need to restrict the teacher's units of instruction. The teacher then is given leeway to be creative and to expand the horizons of the student.)

b. The new requirements are difficult to implement. At higher levels, teachers have a tendency to want to teach in areas they always have taught. Some teachers resent the fact that competency-based

education requires the teacher to drill on basic fundamental curriculum until students are certified.

c. Departments must be creative in order to develop options for students who do not pass the competencies in one school year because students should not be expected to repeat the whole course to be certified in just one or two competencies.

d. Because more time is being spent with students in teaching them specific competencies, there is less time available for teaching electives and enrichment units.

e. Because competency-based instruction requires greater structure, an expanded health curriculum, planned course statements, performance indicators, and three new subject areas (personal finance, citizenship, and career education), staffs complain about needing more preparation time, and curriculum work days.

f. The accountability that certification places on staffs, where the record-keeping system denotes who certified or did not certify a student, causes certain tensions and can result in gripes against the administrators or other persons who are implementing the new graduation requirements.

g. Greater skill is required of teachers to work effectively with individual students who have trouble being certified because they have varied rates of learning. In order to have success in certifying these students, teachers must develop techniques and obtain materials which

will allow the teacher to organize learning activities for the total class, while catering to the different learning rates of students.

h. There may be a greater cost in teaching the competency-based classes and in implementing the new graduation curriculum for schools not already "tooled" for individualized instruction. Materials used for individualized instruction generally are more costly than those used for regular instruction. The implementation of remedial-type classes creates greater per-pupil costs for the courses in which students must be certified for graduation. (However, by placing more students in elective courses where competency certification is not mandated, costs can be reduced. In other words, competency certification generates the need for special individualized classes, yet also creates more room for elective courses which do not necessarily require specialized materials. The latter helps reduce costs.)

i. The addition of a full year of health, citizenship, career education, and personal finance places a strain on the staff and administrators, because in order to keep costs down, some staff members must be relocated from other subjects, courses, or jobs which they have held.

j. Schools that do not have access to a computer are handicapped. Too much time can be taken with hand recording and filing student competencies that have been certified by teachers. A computer can handle filing and recording tasks efficiently and effectively and also will allow a school to print out the stored data quickly for reports to parents, teachers, students, and administrators. Also, districts that

utilize computers can run sophisticated analyses and reports concerning the instruction of students based on the district-prescribed competencies.

WHERE WE ARE WITH THE NEW HIGH SCHOOL REQUIREMENTS

The written work of the Special Task Force of the National Association of Secondary School Principals on competencies, *Graduation Requirements*,[5] and another handbook produced by the same association, *Competency Tests and Graduation Requirements*[6], indicate, not only in Oregon but on a national level, that many questions are being raised concerning the meaning and worth of the diploma. Graduation requirements are currently in a state of flux. A number of states are modifying their graduation requirements to include specific performance criteria, notably California, Arizona, Virginia, Florida, Maryland, New York, and Louisiana.

In Oregon fifty schools are using the computer system developed by the Oregon Total Information Service. OTIS has established a bank of competencies from which school systems may draw, and it also has a sophisticated record and report system.

The Grants Pass School District is developing a computer system patterned after OTIS. A private computer agency in Grants Pass is working with the school system to develop the graduation requirement record-keeping system. Other districts throughout the state are using computer systems of various types or have developed hand recording systems of their own ingenuity. All districts have had to develop some method of handling the data collected when teachers certify students as being

competent in a subject area. Those districts that "dug in" at the beginning and went to work when the state first mandated the graduation requirements are, of course, in better shape than those districts who thought "the whole thing would go away" and put off doing very much work on the new requirements.

Some districts strived to circumvent the whole idea of competency-based education and said, "If students pass the course, they are certified as competent." Those districts got behind in developing curriculum, competency tests, and performance indicators, and are having to work hard to "catch up."

The State Department has not obtained as much commitment from districts to work on the new graduation requirements as it would like. However, from this writer's viewpoint, upon being a member of the Secondary Principals' Educational Policies Commission and from listening to administrators throughout the state, the state-mandated graduation requirements are catching on, and districts are striving to be in compliance; thus, the graduation requirements program is moving ahead.

The State Department of Education has had to repeal its original mandate that all the new graduation requirements would be applicable to the class of 1978. Too many schools, it was felt, were not prepared adequately to meet the 1978 timeline in all competency areas. The State Department has, however, retained the requirement that all students must be certified in communication and computation by 1978 if they are to receive a standard high school diploma. The timeline on other subject areas has been extended to 1981.

Some schools have developed their curricula to the degree that a student may obtain credit by examination. Credit by examination is a process for ascertaining student competencies for the purpose of waiving course requirements and, if deemed appropriate, granting credit.

The State Department of Education also has allowed all school districts the options of granting credit or not granting credit for off-campus and independent study programs. Districts also have the choice of allowing early graduation and the granting of certificates of competency, or attendance in lieu of a diploma, if a student cannot be certified.

Districts have developed different standards for dealing with the above options. This writer has not researched all districts at this time to determine how many are involved in particular programs, but there are many different programs which have been established pertaining to the above options.

The term survival education, first applied to the basic competencies, has been replaced with the term functional education, because some people feel the word survival is too basic. One of the arguments expressed against the new graduation requirements is that students will be harmed in their preparation for college because college preparation requirements are being reduced and instruction in career education, citizenship, personal finance, and health education is being increased. The argument is invalid. There is considerable literature available to indicate that students do not need a college preparatory curriculum in order to be successful in college.

This writer reviewed twelve studies conducted over the past forty years related to college success. These studies showed there was no correlation between the courses a student took in high school and his success in college. Three of those studies are briefly cited here:

In 1931 Harl R. Douglass stated in a study:

> Not only is there little or no relation between pattern of high school credits and college success, but apparently there is little relation between the mastery of any particular subject and college success.[7]

In another study in 1947 Samuel Vaughn commented:

> To date we have found no study that supports the thesis that so-called "academic" subjects constitute a "significantly" better preparation for entrance to college than the non-academic subjects.[8]

In 1957 Harley F. Garret said:

> Studies seem to prove conclusively that there is practically no relationship between the number or pattern of high school subjects and later college success.[9]

After working with the new graduation requirements and competency-based education for four years, most teachers are now becoming knowledgeable and can work with performance indicators. Robert F. Mager, author of the books, *Analyzing Performance Problems* and *Preparing Instructional Objectives*, has had a significant influence on the development of Oregon's competency-based graduation requirements. In 1962 he began proclaiming the value of performance-based instruction--as found in his *Preparing Instructional Objectives*. On page 1 of this book, he says:

1. Given one or more instructional objectives, you will be able to select those stated in performance terms.

2. Given a well-written instructional objective, you will be able to identify the portion of it that defines minimum acceptable performance.

3. Given one or more performance (test) items, you will be able to select those appropriate to the evaluation of the objectives.[10]

The statements above reflect how Oregon determines "performance indicators" which result from stated competencies.

The fact that it is presently possible for a student to enroll in both a community college and high school for dual enrollment credit, and be able to graduate early from high school, poses a problem that must be solved.

Presently the high school has no control over courses given in community colleges. However, when the class of 1978 graduates, and if the community college intends to offer high school credits for required high school graduation, the community college will need to teach the same competencies as the high school if the student intends to be certified for a standard high school diploma.

The community college situation is just one more example of where we are now and what we still need to do to make the new requirements work, and to make the high school diploma more meaningful.

WHERE THE STATE GRADUATION REQUIREMENTS MIGHT LEAD US

If one believes that through allocation of resources, motivation, emphasis, and drill, the fundamental skills and knowledges can be taught, there is real worth in the educational plan as presented through the new graduation requirements. By identifying the educational needs of our students and society, and by establishing goals and curricular direction to meet those needs (which the new graduation requirements do),

many of the educational needs which have been illustrated in the introduction of this Bulletin will be met.

The graduation requirements are leading us to update curricular changes; individualize more instruction; establish financial priorities; develop scope and sequences for teaching the basics; and improve communication among high schools, junior highs, and elementary schools. Better lesson planning, use of resources, and utilization of the community is taking place. Teachers, administrators, and the public are being made more accountable for education, and the computer is giving data for analysis of educational progress.

The requirements should lead us to these results:

1. Students will become more proficient with basic skills as teachers begin emphasizing the communication and computational skills in efforts to have their students certified as competent so they may graduate with a standard diploma.

2. By offering different avenues toward obtaining a diploma, and using the community as a classroom, students will find school more varied, interesting, and practical. They will complain less about school being boring.

3. Adults will begin to have renewed respect for the high school diploma and education.

4. Students who do not intend to attend college will be able to find, through expanded elective opportunities and the world of work, a more significant and interesting high school program.

5. The "lock-step" system in education will be broken. Students may challenge courses and move to a higher level of knowledge without

being tied to a particular class. For example, if a student can pass the ninth grade competency and unit tests, why not let him or her move on to tenth grade English?

6. The cultural isolation of youth will be lessened as students begin to spend more time in the community working with adults and learning responsibilities rather than spending quite so much time with their peers.

The new requirements, however, can only help us overcome much of the functional illiteracy. Besides the competencies, the attitudes of teachers and administrators toward the new requirements are important, as are their efforts to implement them. Drill alone will not win the ball game; desire is also important.

Teachers and administrators have a tendency to resent the new requirements. However, it has been this writer's experience that feelings become positive after the program has been placed in operation. In a survey taken after a school had been on a three-year developmental plan and the program was in operation one year, a staff which had been negative in the beginning became positive. When the survey (shown on page 28 of this Bulletin) was administered, only 12 percent of the entire staff still showed any negative feelings toward the record-keeping system and the program which had been developed in the school to meet the new requirements.

When teachers feel that the work of competency certification and record-keeping is not too time consuming and they have developed "ownership" of the curriculum, their attitudes are good. This undoubtedly affects the students' learning.

COMPONENTS OF A PLAN TO MEET THE NEW GRADUATION REQUIREMENTS

Ideally a graduation requirement system should contain:

(1) a flexible two-year transition course structure,

(2) a report and record-keeping system (preferably computerized),

(3) a letter to parents explaining competencies,

(4) a rationale and position paper which allows for staff input,

(5) a staff attitudinal survey,

(6) a guidelines-for-graduation handbook,

(7) a guidance forecast model, and

(8) a "How to Teach Competencies" statement.

A Transition Course Structure

A good transition structure will allow a smoothly organized transition into the new state graduation requirements. It will allow a sequence of courses to be developed logically according to student maturity, interest, and need. An analysis needs to be made to determine where courses like health and citizenship can best be taught.

It is wise to keep the structure simple so teachers, counselors, and students do not become confused in the scheduling process. The competencies should not be "scattergunned" throughout many departments where scheduling for students becomes difficult and accountability for teachers to teach the prescribed curriculum is lost.

The transition structure may be placed in the school registration guide where students, teachers, parents, and counselors will be able to

determine 1) the courses required and 2) the sequences necesary to help the student and the school make the transition into the new graduation requirements.

Retaining competencies in many different departments, such as health competencies being taught in P.E., social studies, home economics, and modern problems, can cause severe scheduling problems. For example, a student in a three-year high school may not have time enough in three years to take all the subjects necessary to meet the necessary competencies prescribed for graduation, if they are scattered throughout many courses and departments.

A sample transition chart developed for an eighth grade class just entering high school is on page 20 (next page).

A Computer Report and Record-keeping System

In order for teachers and administrators to develop a good attitude toward the new graduation requirements, it is important that a system be developed which takes very little time for recording and reporting the progress of students as they are being certified in the school's competencies.

The Oregon Total Information Service (OTIS) in Eugene, Oregon, has a good computer program which includes the elements of competency certification through teachers using scan sheet grade cards; through the assigning of competencies to specific courses or departments; the class competency status reports; classroom records; and student competency status reports that go out to schools, the students, and parents.

CLASS 1980
RECOMMENDED REQUIREMENTS FOR GRADUATION
PRESENT EIGHTH GRADE CLASS

AREA OF STUDY	CREDITS REQUIRED STATE	CREDITS REQUIRED DIST.	CREDITS GRADE LEVEL OFFERED	COMPETENCIES GRADE LEVEL AT WHICH MAJORITY SHOULD BE CERTIFIED
COMMUNICATION	3	3	9-10-11-12	9-10
COMPUTATION	1	1	9-10	9
LAB SCIENCE	1	1	9-10	9
SOCIAL SCIENCE	1	1	9-10-11-12	Social Science Electives
PHYSICAL EDUCATION	1	2	9-10	10
CAREER EDUCATION	1	1	9-10-11-12	9-10-11-12
CITIZENSHIP	1	1	10th-½ credit required, 11th or 12th-½ credit elective	10-11-12 Course alternates at semester with health
HEALTH EDUCATION	1	1	10th-½ credit required, 11th or 12th-½ credit elective	10-11-12 Course alternates at semester with citizenship
PERSONAL FINANCE	1	1	12th-½ credit required, ½ credit elect.	12
ELECTIVES	10	10	9-10-11-12	
TOTAL GRAD. CREDITS:	21	22	ENROLLMENT REQUIREMENTS:	9th-10th-11th grade = 6 classes 12th grade = 5 classes

The OTIS computer also gives school analysis reports. As just one illustration of how the computer can be put to use, the administration may ask the computer to answer such questions as, "How many sophomores still have not been certified to read at the seventh grade level?"

A sample report form that goes to schools and homes is shown on page 22. Note that the x's before certain competencies indicate that the student has been certified in those competencies. (The competencies on the form were developed three years ago, and have since been re-evaluated and some changes made.)

The chart on page 23 shows how the teacher certifies a student in a competency. All the teacher needs to do is mark with a pencil one of the small boxes after the student's name.

On page 24 is a sample report that goes to the teacher so he/she will know which students have not been certified. The bottom of the page illustrates a teacher's competency grade book for computer reporting purposes.

A Rationale and Position Paper

If the staff is going to develop "ownership" of the new graduation curricular changes, it is important that staff members be allowed to express themselves and make recommendations about the changes. Each staff member should be given a copy of a rationale and position paper, asked to make written comments on the paper and return it to the principal. A faculty meeting may be held to discuss the various ramifications of the paper and the suggestions and comments of the faculty.

STUDENT COMPETENCY STATUS

STUDENT: GRADE: 09 ST = 69125 X = DEMONSTRATED

PERSONAL DEVELOPMENT

COMMUNICATION

1 LISTEN & RECALL
2 PHRASE QUESTIONS & COMMENTS
X 3 GROUP UNDERSTANDS STUDENT'S IDEAS
X 4 IDENTIFY & USE IDEAS
X 5 USE WRITTEN SOURCES
X 6 GIVE DIRECTIONS
X 7 REPORT & DESCRIBE ACCURATELY
8 STATE & SUPPORT OPINIONS
9 SPELL CORRECTLY
10 CLASSIFY
11 RECOGNIZE INFERENCES
12 UNDERSTAND PERSUASION
13 QUESTION INFORMATION

COMPUTATION

X 14 RECALL WHOLE NUMBER FACTS
X 15 MULTIPLY & DIVIDE BY TENS
X 16 COUNT CORRECT CHANGE
X 17 ESTIMATE WHOLE NUMBER OPERATIONS
X 18 BASIC OPERATIONS-WHOLE NUMBERS
X 19 MONEY OPERATIONS
X 20 BASIC OPERATIONS-FRACTIONS
X 21 BASIC OPERATIONS-DECIMALS
X 22 PRACTICAL APPLICATIONS
X 23 SIMPLE PROPORTION EXERCISES
X 24 SIMPLE RATIO & PERCENT PROBLEMS
X 25 FACTOR & DIVISOR
26 DECIMAL PLACE VALUE
27 LARGE NUMBERS
28 EQUIVALENT NUMBER FORMS
29 NUMBER ORDERING
30 SIMPLIFY COMPUTATIONS
31 ESTIMATE FRACTIONAL PARTS
32 SOLVE FORMULAS
33 INTUITIVE UNDERSTANDING
34 GRAPHS, TABLES, CHARTS
35 DATA INACCURACIES
36 ARITHMETIC AVERAGES
37 PROBABILITY
38 ROAD MAP APPLICATION
39 MEASURING DEVICES
40 MEASURING UNITS
41 GENERAL MEASUREMENT
42 STANDARD MEASURING
43 LINES IN SPACE
44 ANGLE PROPERTIES
45 DIMENSIONAL FIGURES
46 DRAWING TOOLS
47 PLACE FIGURES
48 USE A CALCULATOR
49 COMPUTER USE
50 COMPUTER MISUSE

SCIENCE AND TECHNOLOGY

51 LINEAR DISTANCE
52 VOLUMETRIC QUANTITIES
53 MASS OF MATERIALS
54 METRIC & ENG. SYSTEMS APPLICATION
55 CENTI-KILO-MILLI
56 CONSTRUCTS TABLES & GRAPHS
57 PREDICTING
58 MAKE INFERENCES
59 CLASSIFIES
60 HEAT & MATTER
61 ACIDS, BASES, SALTS
62 MAGNETISM APPLICATION
63 FORCE, DISTANCE, WORK
64 FRICTION
65 CONTROLLING ELECTRICITY
66 STRUCTURE OF ORGANISMS
67 LIFE & CHEMICAL CHANGE
68 CELL STRUCTURE & FUNCTION
69 LIFE BALANCE
70 CHARACTERISTIC TRANSMISSION
71 INHERITED CHARACTERISTICS CHANGE
72 FOOD CHAIN
73 SUN ENERGY
74 CYCLING OF MATTER
75 EXPLAIN STRUCTURE/FUNCTION

HEALTHY MIND

X 76 PERSONAL STRESS
X 77 SELF & SOCIAL RELATIONSHIPS
X 78 IDENTIFY ATTITUDE CHANGES
79 MOOD MODIFIERS
80 FAMILY INFLUENCE ON STABILITY

ILLUSTRATION FOR COMPETENCY CERTIFICATION

SMITH	20	001	648
Instructor	IED	District	School

07	GYM	GPE I	510	04
Period	Room	Course Title	Course Number-Phase	Section

AFTER PMC. MARK BOXES OF COMPETENCIES MET.

BOX #	REFERS TO DISTRICT COMPETENCY:
1	PMC-PASSED MINIMUM COMPETENCIES
2	97 ARM STRENGTH
3	98 STOMACH STRENGTH
4	99 THROWING ABILITY
5	100 GOOD GROOMING
6	101 CLEANLINESS
7	102 DRESSING ROOM SAFETY
8	103 SPECIFIC SPORT SAFETY
9	104 REMOVAL OF TENSION AT READ
10	105 REMOVAL OF TENSION AFTER ACTIVITY
11	106 RELAXATION TECHNIQUES
12	107 SELF-CONTROL IN CLASS ACTIVITIES
13	108 EMOTION IN SPORT
14	109 HEALTHY APPEARANCE & PARTICIPATION
15	110 NORMAL BODY DISTRIBUTION
16	111 BODY ALIGNMENT

COMPETENCY CERTIFICATION

0001311
CONNIE
WHIPPLE

CLASS COMPETENCY STATUS

8111 06 BOYS PE 9

COMPETENCY #	96	97	98	99	100	101	102	103	104
000164 JAMES ADAMS	X	X	X	X	X	X	X	X	X
0002028 RICK BROWN	X	X	X	X	X	X	X	X	X
0002181 ROBERT CARTER	X	X	X	X	X	X	X	X	X
0069049 JOHN DAVIS	X	X	X	X	X	X	X	X	X
0024629 DAN EVANS	X	X	X	X	X	X	X	X	X
0043826 DAVE GREENE		X	X			X			
0007836 MICHAEL HALL	X	X	X	X	X	X	X	X	X
0029088 PAT JOHNSON	X	X	X	X	X	X	X	X	X
0051180 BILL LONG	X	X	X	X	X	X	X	X	X
0012036 DON MOORE	X	X	X	X	X	X	X	X	X
0078132 SCOTT SMITH	X	X	X	X	X	X	X	X	X

SAMPLE GRADE BOOK PAGE RECORDING PERFORMANCE

Student Name	Course Grade	Competency 1.1.1.1 PI 1	PI 2	PI 3	PI 4	Complete	Comp. 1.1.1.2 PI 1	PI 2	Complete	Comp. 1.1.1.3 PI 1	PI 2	PI 3	Complete	Competency 1.1.1.4 PI 1	PI 2	PI 3	PI 4	Complete
1. Brown, Sue	A	✓	✓	✓	✓	9/76	✓	✓	10/76	✓	✓	✓	11/76	✓	✓	✓	✓	12/76
2. Case, Ann	A	✓	✓	✓	✓	9/76	✓	✓	10/76	✓	✓	✓	11/76	✓	✓	✓	✓	12/76
3. Day, Tom	F	✓	✓							✓	✓	✓	11/76		✓		✓	
4.																		
5.																		
6.																		
7.																		

Changes should be made in the paper if the suggested changes are deemed valid by the administration and the majority of the faculty.

There undoubtedly still will be some animosities on the part of a number of staff members because the new requirements are "turning away" from a college preparatory type curriculum, and some of the courses which staff members have been teaching will be threatened. Fewer students will be required to take courses which traditionally have been required, and some instructors will see these changes as a threat to their job security.

A Letter to Parents

It is important that the parents of students be informed and prepared for the computerized competency report form that will be sent home each semester. One purpose of the letter is to encourage questions. If competency certification sheets were sent home without an enclosed letter explaining the new program, poor public relations could result. The letter should develop better feelings on the part of parents. If they have questions which need answering, the letter tells whom they may contact. A sample letter can be found on page 26.

Graduation Guidelines Handbook

A handbook should be developed which recommends to the school board, administrators, and teachers the options given to districts on early and delayed graduation, credit by examination, off-campus credit, and independent study. Forms need to be developed for record-keeping

Dear Parent:

Enclosed you will find a copy of your son or daughter's competency sheet for the second semester of the 1976-77 school year.

The new state high school graduation requirements specify that a student must pass district-prescribed minimum competencies in order to receive a standard high school diploma. In addition a student must obtain 22 credits, and spend at least 130 hours in each course for which he or she is granted a credit. The credits and hours spent in class always have been required. The new concept we are dealing with this year for the first time are the minimum-level competencies. The minimum-level competencies have been prescribed by the State Department of Education in an effort to make a high school diploma truly meaningful. Those students who do not pass the competencies will not receive a standard high school diploma. Instead they will receive a certificate of competency upon which will be marked those competencies that they have passed.

Those competencies which your youngster has had certified by his or her instructors are marked with an X. He or she will have two more years to meet the competencies which are not certified. It may be that the competencies in science and citizenship will be waived for graduation for the sophomore class because the development of the competencies and curriculum are incomplete at this time. This will not change the number of credits required. We will inform you next year as to the status of science and citizenship competencies.

In the future it is anticipated that more students will be certified at the elementary and junior high levels in the areas of social science, math, communications, and science. Most of the competencies will be certified by the sophomore year, but personal finance, health, citizenship, and career education will not be certified until the senior year.

We hope you will be pleased with our record-keeping system and these reports. Any suggestions, comments, or questions which you have will be appreciated. Please feel free to call the counselors, the vice-principal, or me at the high school.

Sincerely,

LORIN L. MILLER
Principal

purposes on each of these options, and rationale statements communicated in the handbook so there will be an understanding of reasons for granting or not granting credit. The staff must know the procedures to follow when students have questions about the graduation options. (This writer has a very fine *Graduation Guidelines Handbook* which is available to other districts upon request.)

Staff Attitude Survey

After the new requirements program has been in operation for two years, it is desirable to determine from the staff the program's strengths and weaknesses. In this way adjustments can be made. This writer administered the following survey to his staff when he was principal of Pleasant Hill High School. The high school was helping to pilot a competency-based computer program for OTIS and Lane County.

The results of the survey can be communicated to the school board and central office administration to give evidence for their continued support of the program, or if the results are negative, to determine steps that need to be taken for improvement. A sample survey appears on page 28.

A Guidance Forecast Model

It is important that teachers and counselors have a method of planning the student's four years of high school and of establishing a three-way communication line among teacher, student, and parent as to

TEACHER SURVEY
FOR COMPETENCY-BASED INSTRUCTION
AND THE COMPUTER RECORD-KEEPING SYSTEM

1. I am satisfied with the record-keeping system which the school has piloted for the new graduation requirements. (Check one.)

___ 1) Strongly agree
___ 2) Moderately agree
___ 3) Don't know
___ 4) Moderately disagree
___ 5) Strongly disagree

If you disagree, what would you change about the system? _____

_____

2. The competencies in my department are valid indicators for minimum graduation requirements. (Check one.)

___ 1) Strongly agree
___ 2) Moderately agree
___ 3) Don't know
___ 4) Moderately disagree
___ 5) Strongly disagree

3. I feel that the number of performance indicators which have been developed to teach each competency is satisfactory:

___ 1) Strongly agree
___ 2) Moderately agree
___ 3) Don't know
___ 4) Moderately disagree
___ 5) Strongly disagree

4. I feel that the quality of performance indicators which have been developed is satisfactory.

___ 1) Strongly agree
___ 2) Moderately agree
___ 3) Don't know
___ 4) Moderately disagree
___ 5) Strongly disagree

5. I feel that the competencies which are required for graduation are encouraging students to greater effort to learn the basic subject matter.

___ 1) Strongly agree
___ 2) Moderately agree
___ 3) Don't know
___ 4) Moderately disagree
___ 5) Strongly disagree

6. I feel that I am doing a better job of instruction because of the curriculum work which has been done in developing minimum survival competency-based instruction.

___ 1) Strongly agree
___ 2) Moderately agree
___ 3) Don't know
___ 4) Moderately disagree
___ 5) Strongly disagree

the student's possible goals. At the conclusion of the eighth grade each student should fill out a four-year forecast of the courses he/she will take in high school. Students should be assisted during registration time by their eighth-grade homeroom teachers, and the high school counselors.

Students undoubtedly will change their goals and courses during the four years as they are exposed to career education exploratory courses at the high school. Nevertheless, planning is good because it helps set directions and develop growth.

How to Teach Competencies

Because the teacher's attitude is so important for success of the new graduation requirements program, it behooves the administrator to establish in-service programs to help teachers with competency-based instruction. It might give teachers a more positive attitude toward the new graduation requirements if they were aware that "there is nothing new under the sun." In large measure this statement is true when it comes to competency-based education and dealing with "new" terms such as "performance indicators." To a degree the new graduation requirements are taking us "back to the basics" or at least back about thirty years ago when lesson planning was highly stressed. During that time educators were instructed to develop curricula and plan lessons by using general objectives, specific objectives, units of instruction with resources, timed activities, and evaluations.

Today such terms as "program goals," "competencies," "performance indicators," and "criterion reference testing" are basically similar

to the earlier-used ones. The pendulum is swinging back to a time when more attention was placed on scope and sequence and methodical lesson planning in those areas where education is considered to be very important and basic. Yet this pendulum is not necessarily swinging too far back to a time when creativity often was lost in a too-rigid structure or simply not nurtured. The pendulum need not swing at the expense of utilizing innovations in education which have been tried and found successful in the late 60s and during this decade. Besides the state-required competency-based courses, innovative courses often will fall under "electives," and, as competencies are met by students, they are also free to take some of these electives while still being sure they have attained, or will attain, a suitable level of understanding and skill in the basics.

The new graduation requirements are causing educators to stress better lesson planning and curriculum development in those areas that are deemed most important by a district, and, through better record-keeping systems, to become more accountable to the student and the public; but we need not develop a fear or resentment. There is really not too much new in what we are facing, and we needn't relinquish more imaginative programs in the face of competency-based courses.

As administrators strive to meet the new graduation requirements they should make efforts to reduce class loads in those courses where the instruction is basic and where there are many individual student differences. They also need to obtain resources--audio-visual aids, workshops, printed material for individualized instruction, and teacher

aides--so teachers can teach more effectively and can become more accountable to the students and the public.

It is also recommended that instructors not strive to teach more than four competencies to an average, heterogeneously grouped class during a nine-week period. An instructor needs to be able to have time to give enrichment work to some of the high-achieving students while extra time is being spent with those students who have not yet been certified.

Also, options must be developed for students who were not certified in the regular course. Below is a sample option for the Communications competencies:

> Last Chance English is a junior-senior level elective course, designed on an individualized basis, in which students can meet competency requirements failed in English 9 and/or in Communications Lab or missed while the student was enrolled in Reading Lab during the freshman or sophomore year. Students who are missing some competencies automatically will be enrolled in Last Chance English at the beginning of their junior year, and for them it will be required until the competencies are met.

SUMMARY

Competency-based education will require greater individualization of instruction, and teachers and administrators probably will be held more accountable for teaching a prescribed curriculum in designated courses. The record-keeping system utilizing a computer will give the administration greater knowledge of what is happening in the classroom, from a curriculum standpoint. It is important that techniques be established in communicating with teachers so they do not see the system as a personal threat to them, but rather as a method for them to

help youngsters and to obtain greater resources from the community which will allow them to do a better job of teaching the basics. In-service time for staffs to work on the new curriculum and to gain an understanding of competency-based education is important.

In spite of all the possible dangers of staff concern and unrest brought about by change through the new requirements, it appears that the new requirements are a positive factor in improving American education, and in helping youth to master skills in basic academic areas, thus at least insuring "functional literacy."

NOTES

1. Associated Press release, "Sophs Can't Read, Write in Astoria," *Daily Courier*, Grants Pass, Oregon, Jan. 3, 1976, p. 12.

2. Joanne Farris, "Life Begins at 40," *Register Guard*, Eugene, Oregon, August 16, 1975, p. 4D.

3. C. H. Edson, "Why Scholastic Aptitude Test Scores Are Falling," Oregon School Study Council *Bulletin*, February, 1976, p. 2.

4. National Association of Secondary School Principals, *Competency Tests and Graduation Requirements*, Reston, Virginia, 1976, p. 3.

5. National Association of Secondary School Principals, Special Task Force Report, *Graduation Requirements*, Reston, Virginia, 1975, pp. 4-6.

6. National Association of Secondary School Principals, *Competency Tests and Graduation Requirements*, Reston, Virginia, 1976, p. 4.

7. Harl R. Douglass, "The Relation of Pattern of High School Courses to Scholastic Success in College," *North Central Association Quarterly*, 6:283-297, December, 1931, p. 297.

8. Samuel Vaughn, "Are Academic Subjects in High School the Most Desirable Preparation for College Entrance?" *Peabody Journal of Education*, September, 1947, p. 96.

9. Harley F. Garret, "A Review and Interpretation of Investigations of Factors Related to Scholastic Success in Colleges of Arts and Sciences and Teachers Colleges," *Journal of Experimental Education*, December, 1959, p. 99.

10. Robert F. Mager, *Preparing Instructional Objectives*, Belmont, Calif.: Fearon Publishers, 1962, p. 1.

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